

WHAT IS CLAIMED IS:
~~CLAIMS:~~

1. A network comprising a plurality of network nodes, characterized in that at least part of the network nodes are directly intercoupled via at least one star node, in that the star node contains a plurality of star interfaces which are assigned to at least one network node and in that, in dependence on a pilot signal, one star interface always conveys a message from the assigned network node to the other star interfaces, or from another star interface to at least one of the assigned network nodes.

2. A network as claimed in claim 1, characterized in that each network node in the network is assigned a certain periodically recurrent time section for the transmission of its messages and in that a network node comprises a pilot signal generator which generates a pilot signal which denotes either the whole assigned time section or the beginning and end of the time section.

3. A network as claimed in claim 1, characterized in that each star interface comprises a first and second switch element and a pilot signal detector, in that the first switch element in activated state is provided for allowing a message to pass from the assigned network node to the other star interfaces and the second switch element in activated state is provided for allowing a message to pass from the other star interfaces to the assigned network node and in that the pilot signal detector is provided for activating a first switch element and deactivating a second switch element or deactivating the first switch element and activating the second switch element in dependence on a pilot signal from the assigned network node.

4. A network as claimed in claim 3, characterized in that the first and second switch elements are each a switchable amplifier.

5. A network as claimed in claim 1, characterized in that a star interface is provided for generating a release signal when the assigned network node denotes a message

transmission by a pilot signal, in that the lines conveying the release signal of each star interface are coupled via an OR combination and in that the OR combination transfers the release signal to all the star interfaces of the star node.

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6. A network as claimed in claim 5, characterized in that the OR combination is an OR gate or a wired OR combination.

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7. A network as claimed in claim 2, characterized in that at least one network node is assigned a plurality of star interfaces of which only one is provided for transferring messages in dependence on the state of the assigned network node.

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8. A network as claimed in claim 7, characterized in that at least one network node contains at least two pilot signal generators and two multiplexers for combining the pilot signal generated by the assigned pilot signal generator with a message, and in that a control unit decides over which line connection and over which assigned star interface the message combined with a pilot signal is transmitted.

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9. A network as claimed in claim 8, characterized in that the control unit is provided for testing the operability of the star interfaces, of the line connections and of a circuit component in the network node, which switch component forms the message with the pilot signal and receives such a message, in that during the reception of the message the control unit checks the presence of the pilot signal on the various line connections by evaluating pilot signal detectors, and, during the transmission of the message, the presence of the pilot signal on all the line connections, except for the line connection that transmits the message that has been transmitted.

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10. A network node in a network comprising further network nodes, characterized in that the network node is provided for coupling to further network nodes via at least one star node and in that the network node is provided for indicating a transmission of a message to a star interface of the star node together with a pilot signal.

c' 11. A star node in a network for coupling a plurality of network nodes to a plurality of star interfaces, which are assigned to at least one network node and which, in dependence on a pilot signal, are each provided for transferring a message from the assigned network node to the other star interfaces, or from another interface to at least one of the
5 assigned network nodes.

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